Original Research Article

The Effect of Japanese Script on U.S. Consumer Perceptions of Snack Packaging

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ABSTRACT

In increasingly globalized markets, packaging plays a critical role in shaping consumer perceptions, particularly when consumers rely on visual cues to evaluate unfamiliar products. Previous research suggests that foreign language elements can influence perceptions of quality and authenticity, yet little is known about how unfamiliar writing systems affect these judgments. This study examines how the presence of Japanese characters in snack packaging influences U.S. consumers' perceptions of product quality and authenticity compared to English-only packaging. Using a within-subject survey design, participants evaluated ten digitally created snack packaging images representing five product pairs, each presented in either English or Japanese. Participants rated each product on perceived quality, authenticity, purchase intention, and willingness to pay more using a 5-point Likert scale. Results showed that packaging featuring Japanese characters received higher ratings across all measures, with the largest increase observed in perceived authenticity. While perceived quality also improved, differences in purchase intention and willingness to pay more were relatively modest. These findings suggest that unfamiliar writing systems function as visual cultural cues that enhance perceived authenticity and, to a lesser extent, perceived quality, even when consumers cannot interpret the language. However, these perceptual effects do not strongly translate into behavioral outcomes, highlighting a gap between consumer perception and purchasing decisions.

Keywords: Consumer Perception; Packaging Design; Foreign Language; Authenticity; Japanese Script; Food Marketing

INTRODUCTION

Packaging plays a central role in shaping consumer perceptions, particularly in contexts where consumers rely on external cues to evaluate products. Rather than functioning solely as protection or storage, packaging serves as a powerful communication tool that influences expectations, perceived quality, and purchase behavior. Research shows that consumers use visual and textual elements such as color, shape, symbols, and written language to form judgments about a product before consumption, often relying on these cues in place of direct product knowledge (1). As a result, packaging design can strongly affect both conscious and subconscious evaluations, shaping not only how a product is perceived but also whether it is chosen at all.

Within this broader framework, language functions as a particularly influential packaging cue (2). Unlike intrinsic product attributes, language operates as an extrinsic signal that shapes perception without altering

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the product itself. Studies on foreign language labeling demonstrate that the presence of non-native language on packaging can influence consumer evaluations, including perceived quality, trust, attention, and purchase intention (2). These effects occur because language carries associative meaning, allowing consumers to infer characteristics about a product based on linguistic cues rather than direct experience. In this way, language can act as a shortcut in consumer decision-making, shaping perception even when it does not provide meaningful information about the product itself (2).

In food contexts, these dynamics are further reinforced by the concept of authenticity. Perceived authenticity has been identified as a key factor influencing customer satisfaction and purchase intention, particularly in ethnic or culturally associated products (3). Importantly, authenticity is often constructed through signals of difference and unfamiliarity. Research shows that elements such as unfamiliar ingredients, unique food names, and narratives about cultural origin can increase consumers' perceptions of authenticity, as they create a sense of novelty and "otherness" (3). At the same time, some studies suggest that unfamiliarity can also introduce feelings of uncertainty or risk, indicating a complex relationship between novelty and consumer comfort. Together, these findings suggest that both language and unfamiliar cultural cues play a significant role in shaping how consumers interpret the authenticity and quality of food products.

Despite extensive research on packaging, language, and consumer perception, existing literature reveals several important limitations. Much of the research on foreign language in marketing focuses on contexts in which the language is at least partially familiar or interpretable to consumers. For example, studies frequently examine widely recognized languages such as English or Italian and analyze how these function as country-of-origin cues that convey specific cultural associations (2). As a result, language is often treated primarily as a source of semantic meaning rather than as a purely visual or symbolic element, particularly because many studies focus on languages that use Roman scripts and are therefore more accessible to U.S. consumers.

Additionally, while prior research has established that language can influence consumer perception, there remains limited understanding of how language affects visual processing itself. Existing studies have noted that the relationship between language and visual perception is not yet well established, indicating a gap in research connecting linguistic cues directly to perceptual interpretation (4). This suggests that current frameworks may overlook the ways in which language operates beyond meaning, particularly in shaping how consumers visually engage with packaging.

Most importantly, there is a lack of research examining how consumers respond to entirely unfamiliar writing systems, such as non-Roman scripts. While previous studies demonstrate that foreign language can enhance perceptions of quality and authenticity, they do not address how these effects operate when consumers cannot read or interpret the language at all (2). In such cases, language may function less as a communicative tool and more as a visual and cultural symbol. The absence of research on this distinction represents a significant gap, particularly in the context of global food markets where non-Roman scripts, such as Japanese characters, are increasingly present on product packaging.

Therefore, further research is needed to understand how unfamiliar scripts influence consumer perceptions of quality and authenticity. This study addresses this gap by examining how the presence of Japanese characters in snack packaging influences U.S. consumers' perceptions of product quality and authenticity compared to English-only packaging. In addition, it explores how individual factors, such as familiarity with Japanese culture and writing systems, may shape these perceptions.

METHODS AND MATERIALS

This study employed a within-subject survey design in which participants evaluated digitally created snack packaging presented in either English or Japanese to assess differences in consumer perception.

Participants and Ethical Considerations

Participants were recruited through convenience sampling using online distribution of a Google Forms survey. The survey link was shared through the researcher's personal Instagram and Reddit. A total of 30 participants voluntarily completed the survey, and no compensation was provided. The study involved anonymous, minimal-risk survey procedures. Before accessing the questionnaire, all participants reviewed an electronic informed-consent statement describing the study's purpose, procedures, voluntary nature, potential risks, confidentiality protections, and their right to discontinue participation at any time. Participants indicated their consent by choosing to proceed with the survey. Responses were collected anonymously,

except when participants voluntarily provided an email address for possible follow-up contact; email addresses were stored separately from survey responses and were not included in the analysis. All participants indicated that they currently resided in the United States and were therefore included in the analysis. Demographic information, including age, language exposure, familiarity with Japanese culture and writing systems, and snack consumption habits, was collected to better understand the sample and examine potential influences on consumer perception.

Materials

The primary materials for this study consisted of ten digitally created images of snack packaging. The packaging images were digitally designed using AI-assisted image generation through Nova AI and ChatGPT and edited to simulate realistic snack products. These images were organized into five pairs, with each pair representing a different snack product and design style. Within each pair, one version of the packaging was presented in English, while the other was presented in Japanese.

Each pair was designed to be mostly the same in all visual aspects, including layout, color scheme, imagery, and font style, with the only difference being the language used on the packaging. This controlled design allowed for direct comparison between English-only and Japanese-script conditions.

The five categories included dark chocolate (minimalist/premium design), potato chips (bright/playful design), rice crackers (traditional design), instant ramen (busy/icon-heavy design), and energy drinks (modern/trendy design). These categories were selected to represent a range of common snack types and packaging styles in order to increase the generalizability of the results.

Procedure

Participants completed an online questionnaire administered via Google Forms. The complete survey instrument is provided in Appendix A. The survey began with an informed introduction explaining the purpose of the study, followed by demographic and background questions. These included age, language exposure, country of residence, and familiarity with Japanese culture and writing systems, as well as frequency of encountering unfamiliar scripts and frequency of snack consumption.

After completing the background section, participants were presented with a series of ten snack packaging images. Each participant viewed all ten products, which included five pairs of designs representing the same product in either English or Japanese. The images were shown sequentially in a fixed order.

For each product, participants were asked to evaluate their first impressions using a set of rating scales. Prior to this section, participants were provided with standardized definitions of key terms to ensure consistent interpretation.

After each product evaluation, participants were given the option to provide open-ended comments to clarify or elaborate on their responses. At the end of the survey, participants could optionally provide an email address if they were willing to be contacted for follow-up questions.

Measures

Participants' evaluations of each product were measured using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). For each of the ten snack packaging images, participants responded to four key statements assessing their perceptions: perceived quality ("This product seems high quality"), perceived authenticity ("This product seems authentic"), purchase intention ("I would consider buying this product"), and willingness to pay more ("I would be willing to pay slightly more for this product")

To ensure consistency in interpretation, participants were provided with standardized definitions prior to this section. "High quality" was defined as the product appearing well-made, reliable, and of good overall standard, while "authentic" was defined as the product appearing genuine and meaningfully connected to a real culture or origin.

Data Analysis

Quantitative data were analyzed using descriptive and inferential statistics. Mean ratings and standard deviations were calculated separately for the English and Japanese packaging conditions across four dependent variables: perceived quality, perceived authenticity, purchase intention, and willingness to pay more. Because each participant evaluated both language conditions, paired-samples t-tests were conducted to compare ratings between English and Japanese packaging. Statistical significance was evaluated using an alpha level of .05. Effect sizes were calculated using Cohen's d to assess the magnitude of observed differences.

Open-ended responses were reviewed qualitatively

to identify recurring themes and illustrative participant comments. Because the qualitative component was exploratory and conducted by a single researcher, formal coding procedures and inter-rater reliability measures were not employed. Qualitative responses were used to supplement interpretation of the quantitative findings rather than serve as primary evidence.

RESULTS

To examine the effect of language on consumer perception, mean ratings were calculated for products presented in English and Japanese across four measures: perceived quality, perceived authenticity, purchase intention, and willingness to pay more.

Table 1 presents the mean ratings, standard deviations, and statistical comparisons for each measure across the English and Japanese language conditions.

Overall, products featuring Japanese characters received higher ratings than their English-language counterparts across all four measures. Paired-samples t-tests indicated that these differences were statistically significant for each outcome variable.

The largest difference was observed in perceived authenticity. Products presented in Japanese received a mean authenticity rating of 3.21 (SD = 0.92), compared to 2.25 (SD = 0.72) for English products. This difference was statistically significant, $t(29) = 4.52$, $p < .001$, and represented a large effect size ($d = 0.82$). Perceived quality was also significantly higher in the Japanese condition (M = 3.19, SD = 0.77) than in the English condition (M = 2.70, SD = 0.70), $t(29) = 2.54$, $p = .017$, $d = 0.46$.

Measures related to consumer behavior showed smaller but still statistically significant differences. Purchase intention was higher for Japanese packaging (M = 2.57, SD = 0.81) than for English packaging (M = 2.17, SD = 0.64), $t(29) = 3.43$, $p = .002$, $d = 0.63$. Similarly, willingness to pay more was greater in the Japanese condition (M = 2.16, SD = 0.85) than in the English condition (M = 1.72, SD = 0.52), $t(29) = 3.11$, $p = .004$, $d = 0.57$.

Figure 1 presents the mean ratings for English- and Japanese-language packaging across all four outcome measures. Consistent with the statistical analyses reported in Table 1, Japanese-language packaging received higher ratings than English-language packaging for perceived quality, perceived authenticity, purchase intention, and willingness to pay more. The largest difference was observed for perceived authenticity, while differences in purchase intention and willingness to pay more were comparatively smaller.

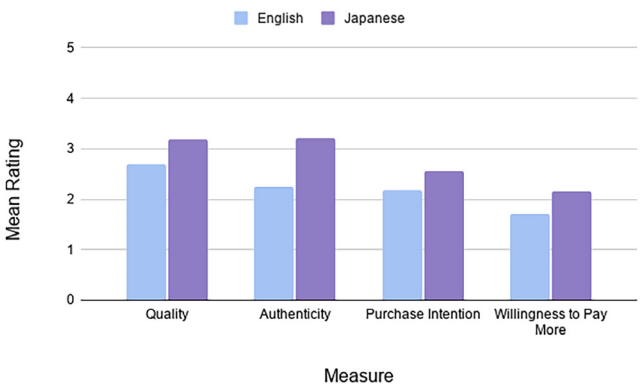

Figure 1. *Mean ratings for snack packaging presented in English and Japanese across four outcome measures: perceived quality, perceived authenticity, purchase intention, and willingness to pay more. The x-axis displays the four evaluation measures, and the y-axis displays mean participant ratings on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Higher values indicate more favorable evaluations. Bars compare mean ratings between the English-language and Japanese-language packaging conditions.*

Table 1. *Mean Ratings and Statistical Comparisons by Language Condition.*

Measure	English M (SD)	Japanese M (SD)	t(29)	p	Cohen's d
Quality	2.70 (0.70)	3.19 (0.77)	2.54	.017	0.46
Authenticity	2.25 (0.72)	3.21 (0.92)	4.52	<.001	0.82
Purchase Intention	2.17 (0.64)	2.57 (0.81)	3.43	.002	0.63
Willingness to Pay More	1.72 (0.52)	2.16 (0.85)	3.11	.004	0.57

Note. M = mean; SD = standard deviation. Paired-samples t-tests were used to compare English and Japanese language conditions.

DISCUSSION

The results of this study demonstrate that the presence of Japanese characters on snack packaging was associated with higher consumer ratings across all measured outcomes, with the strongest effect observed for perceived authenticity. Across all products, packaging featuring Japanese script received consistently higher ratings than English-only versions, with the most pronounced difference observed in authenticity. This finding supports the hypothesis that unfamiliar or foreign visual cues can enhance perceptions of cultural genuineness (5).

The strong increase in perceived authenticity aligns with prior research suggesting that unfamiliar elements, such as foreign language or unique naming, contribute to a sense of "otherness" that consumers associate with authenticity (6). As discussed in earlier studies, authenticity is often constructed through signals of difference rather than through verifiable cultural accuracy (7). In this context, Japanese characters appear to function as a visual marker of cultural origin, even when participants are unable to read or interpret the text.

However, the effect of Japanese script was less pronounced in measures related to consumer behavior, such as purchase intention and willingness to pay more. While both variables showed slight increases in the Japanese condition, the differences were relatively small compared to those observed in authenticity. This suggests that although foreign language cues may shape perception, they do not necessarily translate into stronger economic or behavioral commitment (8). In other words, participants may perceive a product as more authentic without showing equally large increases in purchase intention or willingness to pay more.

Several participant comments were consistent with this interpretation. Some respondents noted that Japanese characters made products feel more authentic or culturally specific, while also expressing hesitation about purchasing or paying more for those products. For example, one participant stated that the presence of Japanese script "elevate[s] at minimum authenticity, if not also perception of quality." Other respondents indicated that unfamiliar text increased curiosity but did not outweigh preferences for taste, familiarity, or product type. Because these comments were reviewed informally rather than through a systematic qualitative analysis, they should be interpreted as illustrative examples rather than independent evidence supporting the quantitative findings.

One limitation of the present study is that individual differences among participants were not examined statistically. Factors such as familiarity with Japanese culture, exposure to non-Roman writing systems, and prior language experience may influence how consumers interpret packaging containing unfamiliar scripts. Although these background variables were collected, the current study did not analyze their relationship to product evaluations. Future research could investigate whether familiarity with Japanese language and culture moderates the effect of foreign-script packaging on consumer perceptions.

Several limitations should be acknowledged. First, the study used a within-subject design in which all participants viewed all packaging images in a fixed order. This may have introduced order effects or response fatigue, potentially influencing later responses. Second, the sample consisted primarily of participants under the age of 25 from the United States, which may limit the generalizability of the findings. Third, the packaging images were digitally generated rather than sourced from real commercial products, which may limit ecological validity. Despite efforts to create realistic designs, AI-generated packaging may lack subtle cues of brand familiarity, market presence, or production authenticity, potentially influencing participants' evaluations independently of language.

Despite these limitations, the findings have important implications for marketing and consumer behavior. They suggest that non-Roman scripts, such as Japanese characters, can function as powerful visual signals that enhance perceived authenticity and, to a lesser extent, perceived quality. However, these perceptual effects do not necessarily translate into stronger purchasing behavior, indicating a gap between how consumers interpret products and how they ultimately act.

CONCLUSION

This study examined how the presence of Japanese characters in snack packaging influences U.S. consumers' perceptions of product quality and authenticity compared to English-only packaging. The results indicate that Japanese-script packaging was associated with higher ratings of perceived authenticity and, to a lesser extent, perceived quality. However, these perceptual effects do not strongly translate into behavioral outcomes, as only modest increases were observed in purchase intention and willingness to pay more.

These findings highlight the importance of language

as a visual and symbolic element in consumer perception. Rather than functioning solely as a source of semantic meaning, unfamiliar writing systems can act as cultural signals that shape how products are interpreted. In particular, Japanese characters appear to enhance the perception of authenticity by introducing a sense of cultural specificity and "otherness," even when consumers cannot read or understand the text. This suggests that language can influence perception independently of comprehension, expanding current understandings of how linguistic cues operate in marketing contexts.

At the same time, the relatively weak impact on purchasing behavior indicates a disconnect between perception and action. While consumers may view products as more authentic or higher quality, these impressions alone may not be sufficient to drive stronger economic commitment. This has practical implications for marketers, suggesting that while foreign language elements can enhance branding and product image, they may need to be combined with other factors to influence purchasing decisions.

Several limitations should be considered. The use of a fixed survey order may have introduced order effects, and the sample was limited primarily to younger participants in the United States, which may restrict generalizability. Additionally, while efforts were made to control visual variables, subtle design differences may have influenced responses. Future research could address these limitations by randomizing presentation order, expanding demographic diversity, and examining additional cultural or linguistic contexts. Further studies could also explore how varying degrees of familiarity with non-Roman scripts influence consumer perception more directly.

Overall, this study contributes to existing research by demonstrating that non-Roman scripts, such as Japanese characters, function as powerful visual cues that shape consumer perception, particularly in relation to authenticity. By highlighting the distinction between perception and behavior, these findings offer a more nuanced understanding of how language influences consumer decision-making in increasingly globalized markets.

CONFLICT OF INTEREST

The author declares that there are no conflicts of interest related to this work.

REFERENCES

1. Gelici-Zeko MM, Lutters D, ten Klooster R, Weijzen PLG. Studying the influence of packaging design on consumer perceptions (of dairy products) using categorizing and perceptual mapping. *Packaging Technology and Science*. 2012 Jun 20; 26 (4): 215-28. https://doi.org/10.1002/pts.1977
2. Shehu E, Vollmann R, Taban A, Cera G, Shehu E. The allure of foreignness: exploring the impact of foreign language labels and the mediating effects of consumer xenocentrism on consumer perceptions. *Journal of International Consumer Marketing.* 2025 May 22; 1-19. https://doi.org/10.1080/08961530.2025.2507655
3. Youn H, Kim JH. Effects of ingredients, names and stories about food origins on perceived authenticity and purchase intentions. *International Journal of Hospitality Management*. 2017 May; 63: 11-21. https://doi.org/10.1016/j.ijhm.2017.01.002
4. Reymont G. The effect of native vs. foreign language on consumer visual perception [Internet]. Rhode Island: Bryant University; 2021 [cited 2026 Apr 24]. Available from: https://digitalcommons.bryant.edu/cgi/viewcontent.cgi?article=1040&context=honors_marketing
5. Gammoh BS, Koh AC, Okoroafo SC. Global vs. local brand positioning strategies: the moderating effect of belief in global citizenship. *Proceedings of the 2010 Academy of Marketing Science (AMS) Annual Conference.* 2014 Oct 12; 314-4. https://doi.org/10.1007/978-3-319-11797-3_179
6. Liu Y, Jang S. Perceptions of Chinese restaurants in the U.S.: what affects customer satisfaction and behavioral intentions? *International Journal of Hospitality Management*. 2009; 28 (3): 338-48. https://doi.org/10.1016/j.ijhm.2008.10.008
7. Wang CY, Mattila AS. The impact of servicescape cues on consumer prepurchase authenticity assessment and patronage intentions to ethnic restaurants. *Journal of Hospitality & Tourism Research*. 2015; 39 (3): 346-72. doi:10.1177/1096348013491600
8. Auger P, Devinney TM. Do what consumers say matter? The misalignment of preferences with unconstrained ethical intentions. *Journal of Business Ethics [Internet].* 2007 Mar 17; 76 (4): 361-83 [cited 2026 Apr 24]. Available from: https://link.springer.com/article/10.1007/s10551-006-9287-y, https://doi.org/10.1007/s10551-006-9287-y

APPENDIXES

Appendix A. Survey Instrument

Section 1

Thank you for participating in this survey. You will be asked to view snack packaging in another language and answer questions about your first impressions. Responses are anonymous unless an email address is voluntarily provided for follow-up communication. All responses will be used solely for academic research purposes.

Please note that the study is meant for those who reside in the USA.

1. What is your age?
   - Under 18
   - 18 - 24
   - 25 - 34
   - 35 - 54
   - 55+

2. Which language(s) have you studied or have had meaningful exposure to? (Meaningful exposure can mean, for example, growing up with a language despite not having taken classes on it)
   - English
   - Spanish
   - French
   - Chinese
   - Japanese
   - Korean
   - German
   - Arabic
   - Hindi
   - Other:

3. Do you currently live in the United States?
   - Yes
   - No

4. What city and state do you live in?

5. How often do you encounter writing systems that you don't read in real life or in media (e.g., Chinese characters, Cyrillic script, Arabic script, etc.)?

Almost never
- 1
- 2
- 3
- 4
- 5

Very Often

6. How familiar are you with Japanese culture?

Not at all familiar (e.g., little to no exposure to Japanese food, media, or cultural practices)
- 1
- 2
- 3
- 4
- 5

Extremely familiar (e.g., regularly engage with Japanese media, food, or traditions)

7. How familiar are you with Japanese writing systems?

Not at all familiar (e.g., have never seen or cannot identify them visually)
- 1
- 2
- 3
- 4
- 5

Extremely familiar (e.g., can read or understand hiragana, katakana, and/or kanji)

8. How often do you buy or consume snacks from stores?
   - Never: Less than 1 time per week
   - Rarely: 1-2 times per week
   - Sometimes: 2-3 times per week
   - Often: 4-6 times per week
   - Very often: 7 or more times per week

Section 2

1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree

*High quality: the product appears well-made, reliable, and of good overall standard.

*Authentic: the product appears genuine and meaningfully connected to a real culture or origin.

9. Product Evaluation

Appendix Figure A1. *Example product evaluation item showing snack packaging and rating scale.*

Table A1. *Product evaluation questions presented for each snack packaging image.*

This product seems high quality*	1	2	3	4	5
This product seems authentic*	1	2	3	4	5
I would consider buying this product	1	2	3	4	5
I would be willing to pay slightly more for this product	1	2	3	4	5

The same evaluation format was used for all remaining products.

Appendix Figure A2. *Additional snack packaging stimuli used in the study (English and Japanese language conditions).*

10. If you would like to clarify anything about your responses, please do so here.

11. If you are willing to be contacted for follow-up questions about your responses, please provide an email address below. Your email will only be used for this purpose.